

**Work Order ID 71020**

Tuesday, June 21, 2011 9:57:53 AM



Page 1

Item ID: D117-762-041

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 6/21/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/27/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date: 6-21-11

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

D3492

C

D3582

Rev A

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile &amp; type labels per PPP D117-762-041 CHG001

120

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

Bend tube as per program D3582 on CNC Bender and Dwg D3582. Folio 3,  
use bending aid DT9632  
2- cut fwd end of tube as per dwg

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130

0.00



Skidtubes

0.00

Skidtubes

Skidtubes

**Memo**

1-Cut Aft end using DT8185

2-Deburr ends

3-Drill Aft Cap holes using DT8678 \*\*\*DO NOT OPEN AFT CAP HOLE\*\*\*

4-Locate DT 8973 &amp; Drill Ground wire hole on top of Tube.

5-Install 3/16 cleco in Ground wire hole ,then drill all X-Bolt holes using 3/16" drill.

6-Drill pilot holes for wearplates using DT8900

7-Open wearplate holes to Ø19/64" (0.297") as per Dwg D3582.

8- open ground wear holes to 0.391" as per section B-B

9-Open Aft Cap holes using .209" drill.

10-Drill pilot holes for section D-D and E-E: Holes must be laid out by hand. Mark out Center line and make sure that 6.65 and 5.906 measurements are respected. Double check before drilling, do not open holes to finish size.

BB 11/07/07

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**NOTE:** Date & initial all entries

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[illegible][illegible][illegible]**Cust Item ID:**

██████████  
██████████

**Customer:**

[REDACTED]

[illegible]

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

**Work Order ID 71020**

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Item ID: D117-762-041

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Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 6/21/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/27/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

170

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

①

B 11/07/12

180

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

1

0

B 06/07/12

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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190

0.00



Skidtubes

0.00

Skidtubes

Memo

1-Open X-Bolt holes to finish size as per Dwg D3582, all sections

2-Counter Sink X-BOLT holes as per Dwg D3582

3-Deburr and blow out chips from inside of tube, prep. tube for welding.

4-Bond web as per Dwg D3582 &amp; QSI 015

A/R 241 Sike Flex Batch: 116945  
Exp Date: 12/01/30

5-Weld x-bolt spacers(D2973) as per Dwg D3582 section B-B.

A/R AL ROD Batch: M112860

6-Grind welds flush

B 11/07/12

B 11/07/12

BE 11/07/13  
B 11/07/13

200

QC10- Inspect visual per QSI004- ground welds

0.00



0.00

QC

Memo

Quality Control

8 11/07/13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

210



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

8 Jul 13

to

215



HandFinish

Hand Finishing

Pressure Wash per QSI005 4.3

0.00

Memo

0.00

Touch-up alodine as per QSI

IX Ø M-L 11/07/13

220



Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

Memo

0.00

START TIME 10:10  
OVEN TEMPERATURE: 320°  
FINISH TIME: 10:40

M11 7745

1 BH 11-7-14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

230

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

1 0 24 6/21/11

240

HandFinishing

0.00



HandFinish

Memo

0.00

Hand Finishing

Install Wearplate &amp; Ground Wire inserts as per Dwg D3582.

1 0 24 6/21/11

W/O:		WORK ORDER CHANGES					
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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250	HandFinishing	0.00							
	HandFinish								
Hand Finishing	Memo	0.00							
	1-Inspect for Foreign objects								
	2-Install Aft cap as per Dwg D3582, Detail "C"								
	A/R 241 Sika Flex Batch: 1117516								
	Exp Date: 15/01								
	3-Install Wearplates as per Dwg D3582,								
	Note: Install Bolt and washer on Ground Wire inserts on top of tube see section D-D of dwg D3582								
	*****Do not install bolts where indicated on Dwg(Note #6)*****								
	A/R 241 Sika Flex Batch: 1117816								
	Exp Date: 15/01								
	4-assemble o'ring as per dwg D3492 and apply o'ring lube								
	A/R 55-o'ring lube batch: 11114189								
	5- Wing Walk as per Dwg D3582 and QSI 005 4.4								
	1117863								
260	QC5- Inspect part completeness to step on W/O	0.00							
	QC								
Quality Control	Memo	0.00							

1 0 11 10-11

5 11/19

11

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Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270	Packaging	0.00							
	Packaging								
Packaging	Memo	0.00							
	Identify and pack for shipping as per PPP D117-762-041								
	Location: _____								
	PPP Rev: <u>PAM/021</u>								
280	QC21- Final Inspection - Work Order Release	0.00							
	QC								
Quality Control	Memo	0.00							

6/21/11 201

11/7/19 20

mf  
11-07-19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

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Page 1

1. The first step in the process is to identify the problem. This involves gathering information about the situation and the people involved.

2. The second step is to analyze the problem. This involves breaking the problem down into smaller parts and identifying the causes.

3. The third step is to develop a plan. This involves deciding on the best way to solve the problem and setting goals.

4. The fourth step is to implement the plan. This involves putting the plan into action and making changes as needed.

5. The fifth step is to evaluate the results. This involves checking to see if the problem has been solved and if the goals have been met.

6. The sixth step is to reflect on the process. This involves thinking about what worked well and what could be improved.

7. The seventh step is to share the results. This involves telling others about what you have learned and how you solved the problem.

8. The eighth step is to continue to learn. This involves staying open to new ideas and ways of solving problems.

9. The ninth step is to be a good team player. This involves working well with others and helping them solve their problems.





10. The tenth step is to be a good leader. This involves helping others to solve their problems and leading them to success.

\_\_\_\_\_

**Required Date: 6/27/2011**

**Required Qty: 1.00**

**Comments:** IPP Rev:A 07.06.11 New Issue EC  
IPP Rev:B 08-02-22 change to revA as per dwg DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3492-11 		Manufactured	No			250	Each	6.0000	2	2			
Plug													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				FP				6		371028	x2		
					70410			6					
D3492-13 		Manufactured	No			250	Each	27.0000	6	6			
Plug													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				FP-B				27			x6		
					46693			27					
D3492-9 		Manufactured	No			250	Each	45.0000	2	2			
Plug													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				FP-A				45			x2		
					46694			45					
D2962-150 		Manufactured	No				Each	82.0000		1			
3.540 Outer Tube, Extrud													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				HALL				82					
					28672			9			1		
					59934			73					

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, June 21, 2011 9:58:00 AM

Work Order ID: 71020

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Start Date: 6/21/2011

Required Date: 6/27/2011

Start Qty: 1.00

Required Qty: 1.00

D2964

Manufactured No

140 Each

22.0000

1

1



Cap

Location

Loc Qty

Loc Code

LG002

22

14101

8

64654

14

D2971

Manufactured No

190 Each

17.0000

1

1



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG001

17

44445

17

D3584-1

Manufactured No

190 Each

0.0000

1

1



Web

D2973

Manufactured No

190 Each

139.0000

2

2



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG002

139

14636

139

D3662-3

Manufactured No

190 Each

17.0000

1

1



Crossbolt Spacer

Location

Loc Qty

Loc Code

LG001

17

44456

17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, June 21, 2011 9:58:00 AM

Work Order ID: 71020

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Start Date: 6/21/2011

Required Date: 6/27/2011

Start Qty: 1.00

Required Qty: 1.00

D3662-1 Manufactured No

190 Each

7.0000

3 3



Crossbolt Spacer

Location

Loc Qty

Loc Code

LG001

7

64451

7

ALS4-1032-130

Purchased No

240 Each

1,478.000

36 36



Insert

Location

Loc Qty

Loc Code

ST281

8

117331

8

ST282

1470

117717

1470

ALS4-428-165

Purchased No

240 Each

529.0000

2 2



Inserts

Location

Loc Qty

Loc Code

FP

486

117769

486

FP-B

43

114172

43

D2965

Manufactured No

250 Each

28.0000

1 1



Cap, 105 Skidtube

Location

Loc Qty

Loc Code

FP006

28

52057

28

BE 11/07/13  
B 71799 x2 x3

252 11/07/14

x36

24 11/07/14

x2

24 11/07/14

x1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Tuesday, June 21, 2011 9:58:01 AM

Work Order ID: 71020

Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 6/21/2011



Required Date: 6/27/2011

Start Qty: 1.00



Required Qty: 1.00

D3508-3	Manufactured	No	250	Each	6.0000	1	1
							<u>21 11/07/11</u>
Wearplate							



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP021	6	371210
38527	1	
67489	5	

D3508-9	Manufactured	No	250	Each	10.0000	1	1
							<u>21 11/07/11</u>
Wearplate							



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP021	10	
70307	10	

D3558-3	Manufactured	No	250	Each	9.0000	1	1
							<u>21 11/07/11</u>
Gasket							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP014	9	
67486	9	

D3558-9	Manufactured	No	250	Each	6.0000	1	1
							<u>21 11/07/11</u>
Gasket							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP014	6	
55469	6	

D3558-11	Manufactured	No	250	Each	11.0000	1	1
							<u>21 11/07/11</u>
Gasket							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP014	11	
70312	11	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, June 21, 2011 9:58:01 AM

Work Order ID: 71020



Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 6/21/2011

Required Date: 6/27/2011

Start Qty: 1.00

Required Qty: 1.00

D3558-13	Manufactured	No	250	Each	25.0000	1	1
							<u>21 11/07/11</u>
Gasket							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP014	25	
<u>59558</u>	25	<u>21</u>

D3508-11	Manufactured	No	250	Each	9.0000	1	1
							<u>21 11/07/11</u>
Wearplate							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP016	9	
<u>69941</u>	9	<u>21</u>

* D3508-13	Manufactured	No	250	Each	3.0000	1	1
							<u>21 11/07/11</u>
Wearplate							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP016	3	
<u>65191</u>	3	

AN960JD10L	NAS1149D0332J	Purchased	No	250	Each	0.0000	2	2
							<u>21 11/07/11</u>	
Washer								

B71027

M117087

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, June 21, 2011 9:58:01 AM

Work Order ID: 71020

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Start Date: 6/21/2011

Required Date: 6/27/2011

Start Qty: 1.00

Required Qty: 1.00

AN3C4A Purchased No  
BOLT

250 Each 2,175.000 28 28

Location Loc Qty Loc Code

ST350 2175  
117094 181  
117313 2  
117688 800  
117795 500  
117872 192  
118012 500

28 11/07/11

AN3C5A Purchased No  
Bolt

250 Each 1,413.000 2 2

Location Loc Qty Loc Code

FP-A 7  
115835 7  
ST350 1406  
116419 28  
116549 54  
117343 500  
117508 24  
117764 300  
117872 500

2 11/07/11

AN960JD416L NAS1149D0416J Purchased No  
Washer

250 Each 29.0000 2 2

Location Loc Qty Loc Code

FP-B 29  
110153 29

116513

2 11/07/11

29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, June 21, 2011 9:58:02 AM

Work Order ID: 71020

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube

Start Date: 6/21/2011

Required Date: 6/27/2011

Start Qty: 1.00

Required Qty: 1.00

AN960C10L NAS1149C0332 Purchased No

250 Each 0.0000 28 28



washer

118306



(x28) 11 1107111

AN4-4A Purchased No

250 Each 96.0000 2 2



Bolt



11 1107111

Location

Loc Qty

Loc Code

FP-B

44

114615

44

x2

ST356

52

114615

52

NAS1611-012 Purchased No

250 Each 50.0000 6 6



O-RING



11 1107111

Location

Loc Qty

Loc Code

FP-A

50

113845

50

x6

NAS1611-015 Purchased No

250 Each 85.0000 2 2



O-RING



11 1107111

Location

Loc Qty

Loc Code

FP-A

85

115101

85

1116081

x2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Page 8

Tuesday, June 21, 2011 9:58:02 AM

Work Order ID: 71020



Parent Item: D117-762-041



Parent Item Name: Replacement Skidtube

Start Date: 6/21/2011

Required Date: 6/27/2011

Start Qty: 1.00

Required Qty: 1.00

NAS1611-016

Purchased

No

250

Each

103.0000

2

2



*Handwritten: 1102/14*

O-RING

Location

Loc Qty

Loc Code

FP-A

103

*Handwritten: 107178*

1

*Handwritten: 112492*

58

*Handwritten: 113524*

44

*Handwritten: X2*

Tuesday, June 21, 2011 9:58:02 AM

Shop Packet Print

Page 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

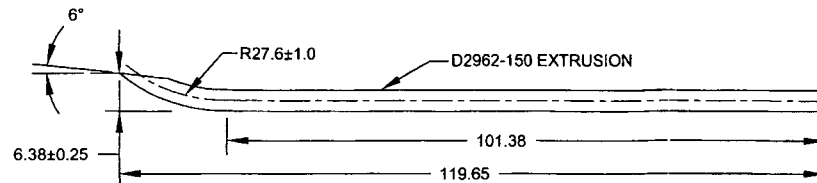
NOTE: Date & initial all entries

# PARTS LIST FOR D3582-041 SKIDTUBE ASSEMBLY

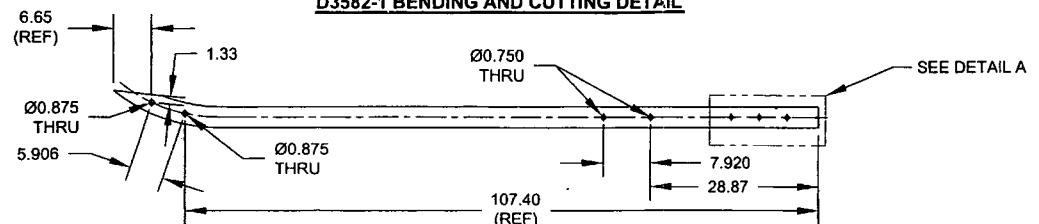
Qty	Part Number	Description
X	D3582-041	SKIDTUBE ASSEMBLY
1	D2962-150	EXTRUSION
1	D2964	CAP
1	O2965	CAP
1	O2971	CROSS BOLT SPACER
2	O2973	CROSS BOLT SPACER
2	D3492-049	PLUG ASSEMBLY
2	D3492-051	PLUG ASSEMBLY
6	D3492-053	PLUG ASSEMBLY
1	D3508-3	WEARPLATE
1	D3508-9	WEARPLATE
1	D3508-11	WEARPLATE
1	D3508-13	WEARPLATE
1	D3558-3	GASKET
1	D3558-9	GASKET
1	D3558-11	GASKET
1	D3558-13	GASKET
1	D3584-1	WEB
3	D3662-1	CROSS BOLT SPACER
1	D3662-3	CROSS BOLT SPACER
36	AELS-1032-130	INSERT
2	ALS7-428-165	INSERT
28	AN3C4A	BOLT
2	AN3-5A	BOLT
2	AN4-4A	BOLT
28	AN960C10L	WASHER
2	AN960JD10L	WASHER
2	AN960JD416L	WASHER

## GENERAL NOTES:

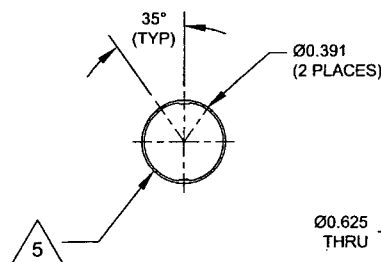
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- WELDING TO BE DONE PER DART QSI 004.
- INSERT D3584-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- USE DART DRILL TEMPLATE DT8900 TO LOCATE AND DRILL Ø0.297 HOLES (36 PLACES) FOR WEARSHOE INSERTS. INSTALL AELS-1032-130 PER SECTION G-G (36 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241/-291.
- DO NOT INSTALL AN3C4A BOLTS AND AN960C10L WASHERS IN INDICATED LOCATIONS.
- FINISH:
  - CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3584-1 WEB.
  - POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3.
  - ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4



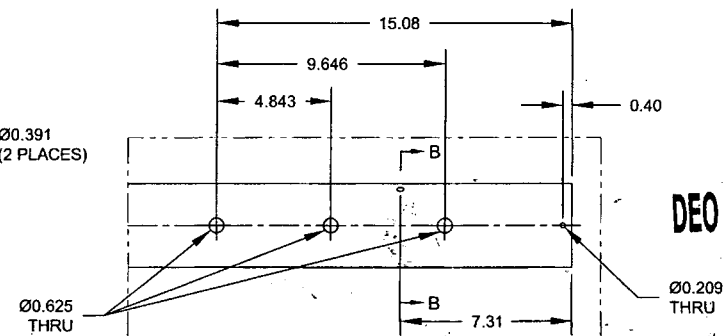
D3582-1 BENDING AND CUTTING DETAIL



D3582-1 DRILLING DETAIL



SECTION B-B  
SCALE 1:5



DETAIL A  
SCALE 1:5

DEO ATTACHED

RELEASED  
07.11.22

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE

WORK ORDER  
NO. 71020

REV.	NEW ISSUE	DESCRIPTION	PH	07.06.08
DESIGN			BY	DATE
DRAWN	PH			
CHECKED	PH			
MFG. APPR.				
APPROVED				
DE APPR.				
DATE	07.06.08			

**DART AEROSPACE USA, INC**  
PORT HADLOCK, WA

DRAWING NO. D3582  
TITLE BK 117 SKIDTUBE ASSEMBLY

REV. A  
SHEET 1 OF 2  
SCALE 1:20

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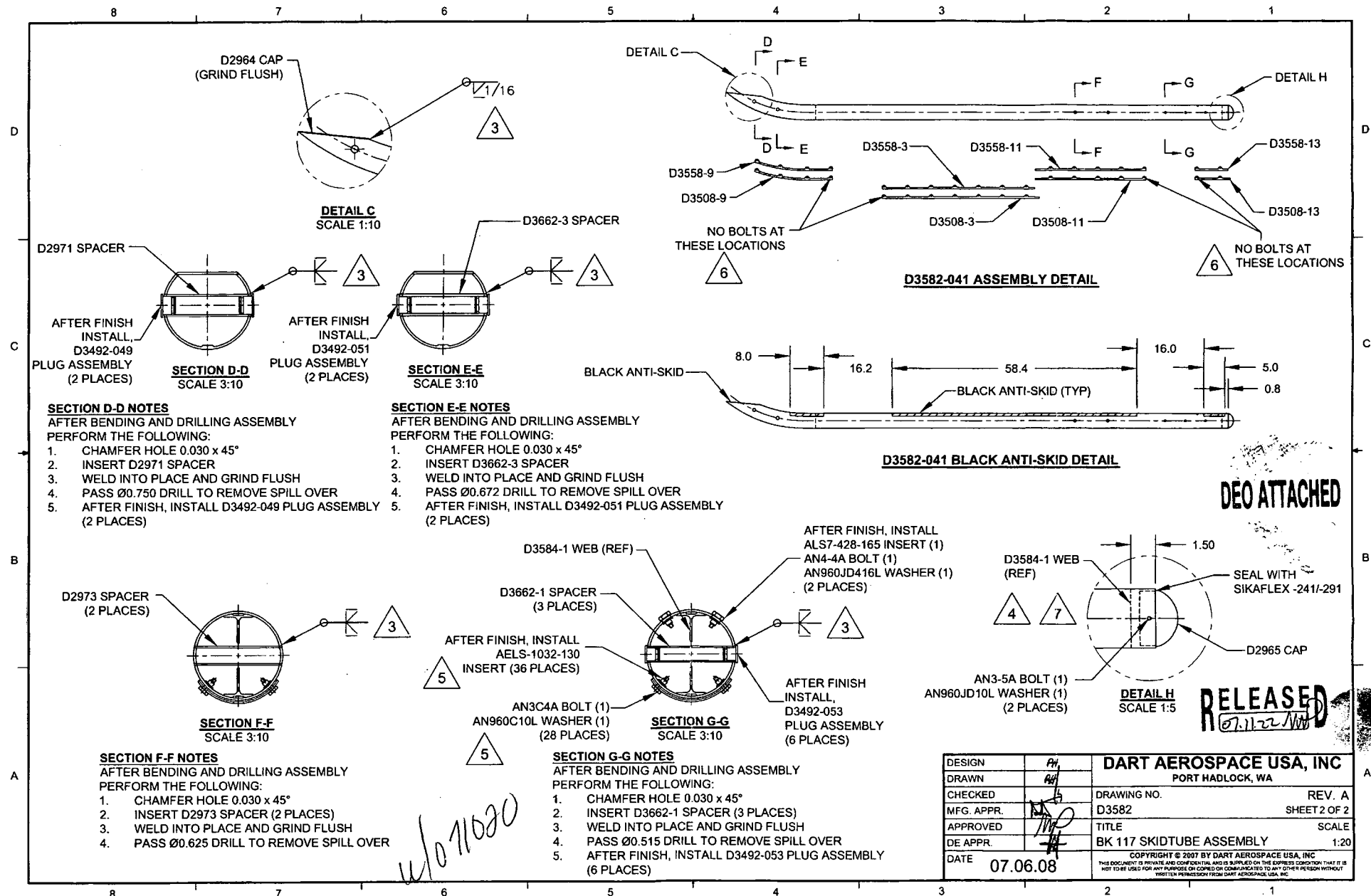
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

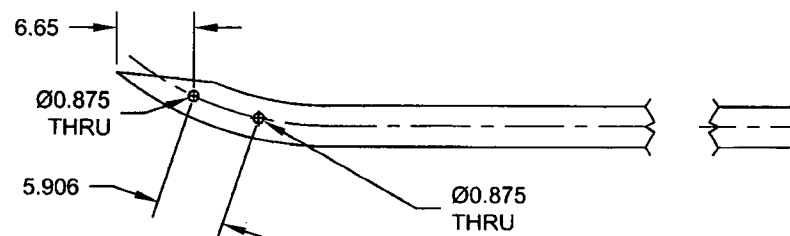
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

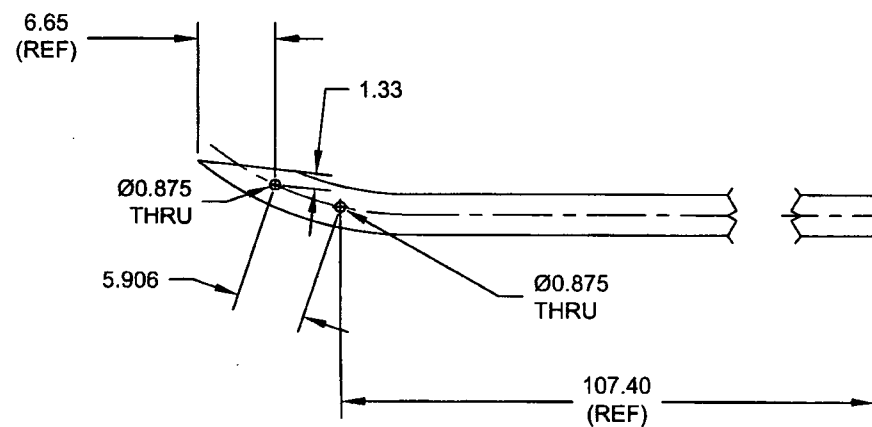
DRAWING NO. D3582	TITLE BK 117 SKIDTUBE ASSEMBLY	REV. A	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3582-A-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>PH</i>	CHECKED <i>A</i>	MFG. APPR. <i>E</i>	APPROVED <i>MD</i>		DE APPR. <i>MT</i>		
DATE 09.04.06	DATE 04.04.06	DATE 09.04.06	DATE 19/04/06		DATE 09.04.06		

FOR EASE OF MANUFACTURE AND TO ENSURE THE FIT OF BRISTOL WIRESTRIKE SKID GEAR DEFLECTOR:  
UPDATE DIMENSIONING OF 2 FWD HOLES ON SHEET 1 AS SHOWN

IS:



WAS:



*Wb 71820*

**RELEASED**  
09/04/22 *MD*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



NO. 245

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 65186  
Part number: D117-762-041  
Description: 117 skid tube  
Welding Process: Tig[☒] Mig[ ]  
Base material: aluminum  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier Sal Lunn Date of Test Coupon 11-01-31

Welder Barclay Elliott Date of Test Coupon 11-01-31

The above named individual is qualified in accordance with AWS D17.1.2001 to weld